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Application No. 10/062,541
September 7, 2004

REMARKS

Reconsideration and allowance of this application are respectfully requested. Currently, claims 22-24, 32-35 and 37-42 are pending in this application. Claims 22-24, 32 and 33 have been indicated as being allowable over the prior art of record. (See section 3 of the Office Action).

Objection Under 35 U.S.C. §132:

Previously filed amendments were objected to under 35 U.S.C. §132 because they allegedly introduce new matter into the disclosure. With respect to claim 33, the limitation "wherein the processor is further programmed to receive the rewrite control program from the rewriting device at the predetermined baud rate" has been deleted from claim 33. The limitation "the new communication speed being higher than a communication speed of the information sent from the external device for the determination of a rewrite mode" in claim 34 has also been deleted. Similar limitations recited in claims 35, 39 and 40 have also been deleted. Applicant therefore respectfully requests that the objection under 35 U.S.C. §132 be withdrawn.

Objection to the Drawings:

The drawings were objected to for allegedly not showing each element specified in the claims. As noted above, the limitation "wherein the processor is further programmed to receive the rewrite control program from the rewriting device at the predetermined baud rate" has been deleted from claim 33. As also discussed above, the limitation "the new communication speed being higher than a communication speed of the information sent from the external device for the

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determination of a rewrite mode" has been deleted from claim 34. Similar limitations have also been deleted from claims 35, 39 and 40. Changing the baud rate before storing the rewrite control program in the second memory is clearly shown by step S1330 labeled "Change. Set Baud Rate (emphasis added)" and step S1340 labeled "Receive Rewrite Control Program, Store in RAM (emphasis added)" in Fig. 12. Applicant therefore submits that the drawings show all of the features specified in the claims and therefore respectfully requests that the objection to the drawings be withdrawn.

Rejection Under 35 U.S.C. §112, First Paragraph:

Claims 33-35 and 37-42 were rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the written description requirement. As noted above, the limitation "wherein the processor is further programmed to receive the rewrite control program from the rewriting device at the predetermined baud rate" has been deleted from claim 33. The limitation "the new communication speed being higher than a communication speed of the information sent from the external device for the determination of a rewrite mode" has been deleted from claim 34. Similar comments apply to claims 35 and 39-40. Applicant therefore respectfully requests that the rejection under 35 U.S.C. §112, first paragraph, be withdrawn.

Rejection Under 35 U.S.C. §102:

Claims 34-35 and 37-42 were rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Berra et al (U.S. 759, hereinafter "Berra"). Applicant respectfully traverses this rejection.

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For a reference to anticipate a claim, each element must be found, either expressly or under principles of inherency, in the reference. Applicant respectfully submits that Berra fails to disclose each element of the claimed invention. For example, Berra fails to disclose a volatile (second) memory for storing a rewrite control program sent from an external device for executing rewriting of a nonvolatile (first) memory. This feature is supported by volatile RAM 22 for storing a rewrite control program in a nonvolatile flash ROM 20a during a rewriting operation. Page 30, lines 9-12 of the originally filed specification states (as amended to correct a typographical error) "volatile RAM 22 and starting the rewrite-control program and so the rewrite-control program copied to the RAM 22 is lost when power to the ECU 2 is interrupted...(emphasis added)."

When a power supply to an ECU 2 in an exemplary embodiment is turned off to stop an engine operation, the volatile memory 22 loses the rewrite control program stored therein. Accordingly, even when the power supply is turned on for a new engine operation, a rewrite control program does not erroneously execute unnecessary writing for any particular reason. This benefit cannot be obtained when a rewrite control program is stored in a non-volatile memory since the nonvolatile memory continues to store its storage content (rewrite control program) even when the power is turned off.

In contrast, col. 15, lines 1-13 of Berra discusses reprogramming non-volatile memories of on-board vehicle computer circuits. That is, col. 15, lines 1-13 discloses

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"With respect to the process of reprogramming the non-volatile memories of other on-board vehicle computer circuits...(emphasis added)."

Berra also fails to disclose changing communication speed with an external device upon the determination of a rewrite mode and before storing in a second memory a rewrite control program sent from the external device, the rewrite control program being executed for rewriting at least one of a device control program and data stored in a first memory, as recited by independent claim 34, or changing communication speed with an external device after the determination of a rewrite mode and before storing in a second memory a rewrite control program sent from the external device, the rewrite control program being executed for rewriting at least one of a device control program and data stored in a first memory, as recited by independent claim 39. Berra also fails to disclose changing a speed of communication with an external device upon the determination of a rewrite mode and before receiving the rewrite control program from the external device for storage in a second memory, the rewrite control program stored by the second memory being executed to rewrite a first memory with at least one of a new device control program and data, as required by independent claim 35, or changing a speed of communication with an external device after the determination of a rewrite mode and before receiving the rewrite control program from the external device for storage in a second memory, the rewrite control program stored by the second memory being executed to rewrite a first memory with at least one of a new device control program and data, as required by independent claim 40.

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The above claimed features are supported by, for example, steps S1300-S1350 in Fig. 12 and page 42, line 19 to page 43, line 9 of the specification. In particular, step S1330 discloses changing a speed of communication with an external device upon determination of a rewrite mode "Yes" in step S1300 and "Yes" in step S1310 before receiving and storing the rewrite control program RAM (S1340) and before beginning execution of the rewrite control program stored in the RAM (i.e., before beginning steps S1500-S1540).

Berra discloses changing the baud rate to a higher baud rate for reprogramming the non-volatile memories of on-board vehicle computer circuits, not changing the speed of communication upon determination of a rewrite mode and before storing the rewrite control program in a volatile memory. In particular, col. 15 of Berra merely discloses changing the baud rate for communication associated with a device control program, not when a rewrite control program is being communicated as in claims 34-35 and 39-40. If anything, Berra's teaching of changing the baud rate when a new device control program is sent from an external device is more relevant to, for example, step S1540 in Fig. 12 than to step S1330 in Fig. 12 of the present application. Berra fails to disclose changing the speed of communication upon determination of a rewrite mode and before storing the rewrite control program in a volatile memory as disclosed by, for example, steps S1310-S1350 of the originally-filed specification.

Col. 14, lines 49-53 of Berra indicates that "...diagnostic tool 28 will continue to send the rest of the new computer program code to the flash memory chip Z179

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(through the microprocessor chip Z144) in an iterative, self-checking process." While col. 15, lines 13-16 of Berra discloses resetting the baud rate to a higher level "for the actual transmission of computer programs to the microprocessor chip Z144 from the diagnostic tool 28." the communication being performed at the higher baud rate level is for reprogramming non-volatile memories similar to memory chip Z179 of controller 12. For example, col. 15, lines 1-9 of Berra specifically indicates that the high baud rate mentioned later in col. 15 (in the same paragraph) is for reprogramming the non-volatile memories of on-board vehicle computer circuits like chip Z179 in engine controller 12. The higher baud rate disclosed in col. 15 is therefore directed to increasing the speed of communication at the time device control programs are being rewritten, not at the time rewrite control programs are being communicated.

Through the above features required by independent claims 34-35 and 39-40, the rewrite control program may be performed at a changed baud rate. (See, e.g., page 43, lines 2-9 of the specification). In contrast, col. 15 of Berra merely discloses changing (increasing) the baud rate for communication associated with a device control program. As noted in col. 14, lines 49-53 of Berra, new computer program code provided to non-volatile memories such as flash memory chip Z179 is reprogrammed through microprocessor chip Z144.

Moreover, claims 34 and 35 specifically require changing the communication speed upon the determination of the rewrite mode. This feature is supported by steps

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S1300-S1330 of Fig. 12 of the present application. Berra fails to disclose the changed communication speed being triggered by the determination of a rewrite mode.

As discussed above, Berra discloses changing the baud rate of communication associated with a device control program. If the vehicle 10 of Berra were turned off and then restarted, the change in baud rate of communication associated with the device control program would not occur before storing that rewrite control program which enabled that baud rate to be changed. Moreover, the change in baud rate of communication associated with a device control program would certainly not occur before beginning execution of that rewrite control program which enabled that baud rate to be changed.

Accordingly, Applicant respectfully submits that claims 34-35 and 37-42 are not anticipated by (nor "obvious" over) Berra and therefore respectfully requests that the rejection of these claims under 35 U.S.C. §102 be withdrawn.

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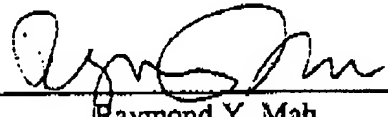
Conclusion:

Applicant believes that this entire application is in condition for allowance and respectfully requests a notice to this effect. If the Examiner has any questions or believes that an interview would further prosecution of this application, the Examiner is invited to telephone the undersigned.

Respectfully submitted.

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